CLAIMS

1. Measuring equipment (4) for forming a measured value (Vu) for voltage representing an ac voltage (U) on a high-voltage conductor (1), said measuring equipment comprising capacitor equipment (C41) with a known capacitance for connection between the high-voltage conductor (1) and ground potential (E), **characterized** in that the measuring equipment further comprises current-measuring means (41) for sensing a capacitor current (Ic) flowing through the capacitor equipment and for forming the measured value for voltage in dependence on said capacitor current.

2. Measuring equipment according to claim 1, **characterized** in that said current-measuring means comprises a resistor (R41) for connection in series with the capacitor equipment, the measured value for voltage (Vu) being formed in dependence on a sensed voltage across the resistor representing the capacitor current.

3. Measuring equipment according to claims 1 and 2, **characterized** in that said current-measuring means comprises a digital/optical measurement value transformer (43) for transforming the measured value for voltage into a series of light pulses (O1) representing the measured value for voltage.

4. Measuring equipment according to any of the preceding claims, **characterized** in that the capacitor equipment is in the form of a coupling capacitor (C) with an external voltage terminal (B41), that the capacitor equipment is arranged in a support insulator, that the measuring equipment comprises a screen (PS) of an electrically conductive material surrounding said external voltage terminal, and that said electrically conductive screen is electrically conductively connected to the casing (N) of the support insulator.

5. Measuring equipment according claim 4, **characterized** in that said resistor is connected between the high-voltage conductor and said external voltage terminal on the capacitor equipment and that, in addition thereto, it comprises current-measuring means (42a, 42b) for forming a measured value for current (Va, Vw) representing a line current (I) flowing through the high-voltage conductor.

6. Measuring equipment according claim 5, **characterized** in that the measured value for current is supplied to said digital/optical measurement value transformer for transforming the measured value for current into a series of light pulses (O1) representing the measured value for current.

7. Measuring equipment according claim 6, **characterized** in that the digital/optical measurement value transformer is arranged to sequentially transform said measured value for voltage and said measured value for current into series of light pulses for sequential transmission to ground potential on a common optical transmission link.

8. Measuring equipment according any of claims 5-7, **characterized** in that said current-measuring means are mounted on the top of said support insulator, and that said electrically conductive screen is electrically conductively connected to the casing (N) of the support insulator as well as to an electrically conductive part (M) on the current-measuring means that is located at the potential of the high-voltage conductor but is electrically insulated from the external voltage terminal of the coupling capacitor.

9. A method for forming at least one measured value (Vu) for voltage, representing an ac voltage (U) on a high-voltage conductor (1), wherein measuring equipment comprising capacitor equipment (C41) with a known capacitance is connected between the high-voltage conductor (1) and ground potential (E), **characterized** in that a capacitor current (Ic) flowing

through the capacitor equipment is sensed and that said measured value for voltage is formed in dependence on said capacitor current.

10. A method according to claim 9, **characterized** in that a resistor (R41) is connected in series with the high-voltage conductor and the capacitor equipment and that said capacitor current (Ic) is sensed as a measured value (Vu) for voltage across the resistor.

11. A method according to any of claims 9 and 10, **characterized** in that the measured value for voltage is supplied to a digital/optical measurement value transformer and that said the measured value for voltage is transformed into a series of light pulses (O1) representing the measured value for voltage.

12. A method according to any of claims 9-11, wherein the capacitor equipment is constituted by a coupling capacitor (C), **characterized** in that the coupling capacitor is provided with an external voltage terminal (B41), that the capacitor equipment is arranged in a support insulator (N), and that said measuring equipment is provided with a screen (PS) of an electrically conductive material, surrounding said external voltage terminal and being electrically conductively connected to the casing (N) of the support insulator.

13. A method according to claim 12, **characterized** in that said resistor (R41) is connected between the high-voltage conductor and said external voltage terminal on the capacitor equipment, and that, in addition thereto, a current-measuring means (42a, 42b) is connected to the measuring equipment, and that a measured value (Va, Vw) for current, representing a line current (I) flowing through the high-voltage conductor, is sensed.

14. A method according to claim 13, **characterized** in that the measured value for current is supplied to a digital/-optical measurement value transformer, and that said mea-

sured value for current is transformed into a series of light pulses (01) representing the measured value for current.

15. A method according to claim 14, **characterized** in that said measured value for voltage and said measured value for current are transmitted sequentially to ground potential on a common optical transmission link.

16. A method according to any of claims 13-15, **characterized** in that said current-measuring means is mounted on the top of said support insulator, and that said electrically conductive screen is electrically conductively connected to an electrically conductive part (M) on the current-measuring means that is located at the potential of the high-voltage conductor but is electrically insulated from the external voltage terminal of the coupling capacitor, as well as to the casing (N) of the support insulator.